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THE
GARY PUBLIC SCHOOLS

PHYSICAL TRAINING
AND PLAY

By

LEE F. HANMER

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PHYSICAL TRAINING AND PLAY

THE GARY PUBLIC SCHOOLS

The results of the study of the Gary Public Schools, undertaken on the invitation of the Superintendent and the Board of Education of Gary, will be published in eight parts, as follows:

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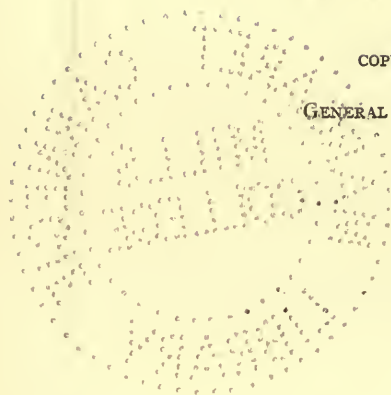
PHYSICAL TRAINING
AND PLAY

BY
Franklin
LEE F. HANMER



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INTRODUCTION

THE GARY PLAN

In the last few years both laymen and professional educators have engaged in a lively controversy as to the merits and defects, advantages and disadvantages of what has come to be called the Gary idea or the Gary plan. The rapidly increasing literature bearing on the subject is, however, deficient in details and too often partisan in tone. The present study was undertaken by the General Education Board at the request of the Gary school authorities for the purpose of presenting an accurate and comprehensive account of the Gary schools in their significant aspects.

In the several volumes in which the main features of the Gary schools are separately considered, the reader will observe that, after presenting facts, each of the authors discusses or—in technical phrase—attempts to evaluate the Gary plan from the angle of his particular interest. Facts were gathered in a patient, painstaking, and objective fashion; and those who want facts, and facts only, will, it is believed, find them in the descriptive and statistical portions of the respective studies. But the successive volumes will discuss principles, as well as

state facts. That is, the authors will not only describe the Gary schools in the frankest manner, as they found them, but they will also endeavor to interpret them in the light of the large educational movement of which they are part. An educational conception may be sound or unsound; any particular effort to embody an educational conception may be adequate or inadequate, effective or ineffective. The public is interested in knowing whether the Gary schools as now conducted are efficient or inefficient; the public is also interested in knowing whether the plan as such is sound or unsound. The present study tries to do justice to both points.

What is the Gary plan?

Perhaps, in the first instance, the essential features of the Gary plan can be made clear, if, instead of trying to tell what the Gary plan is, we tell what it is not. Except for its recent origin and the unusual situation as respects its foreign population, Gary resembles many other industrial centers that are to be found throughout the country. Now, had Gary provided itself with the type of school commonly found in other small industrial American towns, we should find there half a dozen or more square brick "soap-box" buildings, each accommodating a dozen classes pursuing the usual book studies, a playground, with little or no equipment, perhaps a basement room for manual training, a laboratory, and a cooking room for the girls. Had Gary played safe, this is the sort of school and school equipment that it would now possess. Provided with this conventional school



Emerson School Building

system, the town would have led a conventional school life—quiet, unoffending, and negatively happy—doing as many others do, doing it about as well as they do it and satisfied to do just that.

As contrasted with education of this meager type, the Gary plan is distinguished by two features, intimately connected with each other:

First—the enrichment and diversification of the curriculum;

Second—the administrative device that, for want of a better name, will be tentatively termed the duplicate school organization.

These two features must first be considered in general terms, if the reader is to understand the detailed description and discussion.

As to the curriculum and school activities. While the practice of education has in large part continued to follow traditional paths, the progressive literature of the subject has abounded in constructive suggestions of far-reaching practical significance. Social, political, and industrial changes have forced upon the school responsibilities formerly laid upon the home. Once the school had mainly to teach the elements of knowledge; now the school is charged with the physical, mental, and social training of the child. To meet these needs a changed and enriched curriculum, including community activities, facilities for recreation, shop work, and household arts, has been urged on the content side of school work; the transformation of school aims and discipline

on the basis of modern psychology, ethics, and social philosophy has been for similar reasons recommended on the side of attitude and method.

These things have been in the air. Every one of them has been tried and is being practised in some form or other, somewhere or other. In probably every large city in the country efforts have been made, especially in the more recent school plants, to develop some of the features above mentioned. There has been a distinct, unmistakable, and general trend toward making the school a place where children "live" as well as "learn." This movement did not originate at Gary; nor is Gary its only evidence. It is none the less true that perhaps nowhere else have the schools so deliberately and explicitly avowed this modern policy. The Gary schools are officially described as "work, study, and play" schools—schools, that is, that try to respond adequately to a many-sided responsibility; how far and with what success, the successive reports of the Gary survey will show.

It must not, however, be supposed that the enriched curriculum was applied in its present form at the outset or that it is equally well developed in all the Gary schools. Far from it. There has been a distinct and uneven process of development at Gary; sometimes, as subsequent chapters will show, such rapid and unstable development that our account may in certain respects be obsolete before it is printed. When the Emerson school was opened in 1909, the equipment in laboratories, shops, and museums, while doubtless superior to what

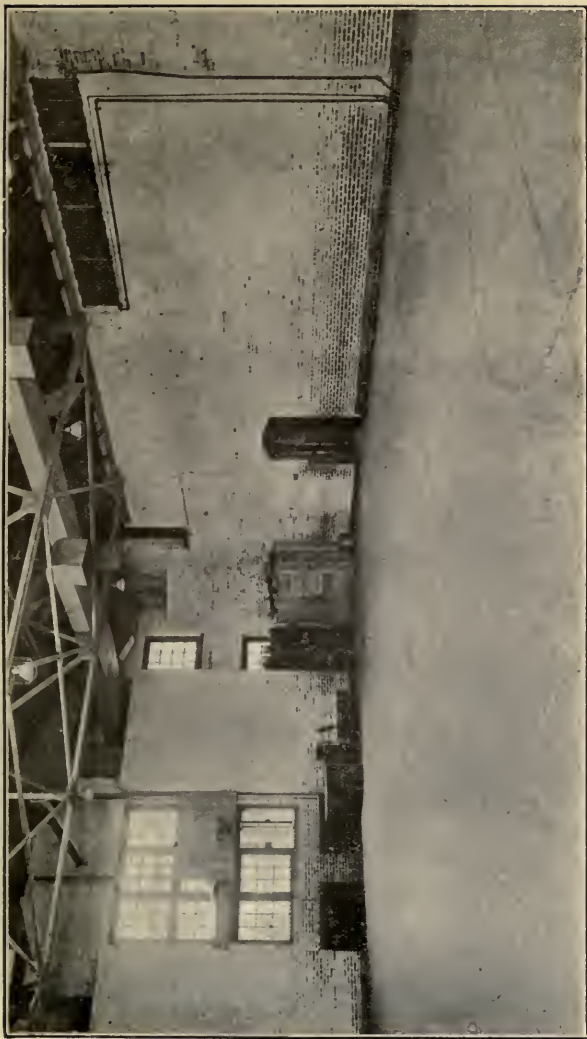
was offered by other towns of the Gary type, could have been matched by what was to be found in many of the better favored larger towns and cities at the same period. The gymnasium, for example, was not more than one third its present size; the industrial work was not unprecedented in kind or extent; the boys had woodwork, the girls cooking and sewing. But progress was rapid: painting and printing were added in 1911; the foundry, forge, and machine shop in 1913. The opportunities for girls were enlarged by the addition of the cafeteria in 1913. The auditorium reached its present extended use as recently as the school year 1913-14. The Froebel school, first occupied in the fall of 1912, started with facilities similar to those previously introduced piecemeal into the Emerson.

These facilities, covering in their development a period of years, represent the effort to create an elementary school more nearly adequate to the needs of modern urban life. The curriculum is enriched by various activities in the fields of industry, science, and recreation. Questions as to the efficiency with which these varied activities have been administered will be discussed by the various contributors to the present study. Meanwhile, it is perhaps only fair to point out that the modern movement calls not only for additions to, but eliminations from, the curriculum and for a critical attitude toward the products of classroom teaching. How far, on the academic side, the Gary schools reflect this aspect of the modern movement will also presently appear.

The administrative device—the “duplicate” organization, noted above as the second characteristic feature of the Gary plan—stands on a somewhat different footing, as the following considerations make plain.

Once more, Mr. Wirt was not the inventor of the intensive use of school buildings, though he was among the first—if not the very first—to perceive the purely educational advantage to which the situation could be turned. The rapidity with which American cities have grown has created a difficult problem for school administrators—the problem of providing space and instruction for children who increase in number faster than buildings are constructed. The problem has been handled in various ways. In one place, the regular school day has been shortened and two different sets of children attending at different hours have been taught daily in one building and by one group of teachers. Elsewhere, as in certain high schools, a complete double session has been conducted. The use of one set of schoolrooms for more than one set of children each day did not therefore originate at Gary.

Another point needs to be considered before we discuss the so-called duplicate feature of the Gary plan. In American colleges, subjects have commonly been taught by specialists, not by class teachers. The work is “departmentalized”—to use the technical term. There is a teacher of Latin, a teacher of mathematics, a teacher of physics, who together instruct every class—not a separate teacher of each class in all subjects. Latterly,



Gymnasium—Froebel School

departmentalization has spread from the college into the high school, until nowadays well organized high schools and the upper grades of elementary schools are quite generally "departmentalized," i.e., organized with special teachers for the several subjects, rather than with one teacher for each grade.

Out of these two elements, Gary has evolved an administrative device, the so-called duplicate school, which, from the standpoint of its present educational significance, does indeed represent a definite innovation.

For the sake of clearness, it will be well to explain the theory of the duplicate school by a simplified imaginary example:

Let us suppose that elementary school facilities have to be provided for, say, 1,600 children. If each class is to contain a maximum of 40 children, a schoolhouse of 40 rooms would formerly have been built, with perhaps a few additional rooms, little used, for special activities; except during the recess (12 to 1:30) each recitation room would be in practically continuous use in the old-line subjects from 9 to 3:30, when school is adjourned till next morning. A school plant of this kind may be represented by Figure I, each square representing a schoolroom.

The "duplicate" school proposes a different solution. Instead of providing 40 classrooms for 40 classes, it requires 20 classrooms, capable of holding 800 children; and further, playgrounds, laboratories, shops, gardens, gymnasium, and auditorium, also capable of holding

800 children. If, now, 800 children use the classrooms while 800 are using the other facilities, morning and afternoon, the entire plant accommodates 1,600 pupils throughout the school day; and the curriculum is greatly enriched, since, without taking away anything from their classroom work, they are getting other branches also. A school thus equipped and organized may be represented

FIGURE I
REPRESENTS OLD-FASHIONED SCHOOLHOUSE

40 rooms for 40 classes, of 40 children each, i. e., facilities for the academic instruction of 1,600 children. A school yard and an extra room or two, little used, for special activities, are also usually found.

by Figure II, in which A represents 20 classes taking care of 40 children each (800 children), and B represents special facilities taking care of 800 children. As A and B are in simultaneous operation, 1,600 children are cared for.

This method of visualizing the "duplicate" school serves to correct a common misconception. The plan aims to intensify the use of schoolrooms; yet it would be

incorrect to say that 20 classrooms, instead of 40, as under the old plan, accommodate 1,600 children. For while the number of classrooms has been reduced from 40 to 20, special facilities of equal capacity have been added in the form of auditorium, shops, playground, etc. The 20 classrooms apparently saved

FIGURE II
 REPRESENTS THE GARY EQUIPMENT

A
 20 classrooms for academic instruction of 20 classes of 40 children each (800 children) in the morning hours and an equal number in the afternoon (1,600 in all daily)

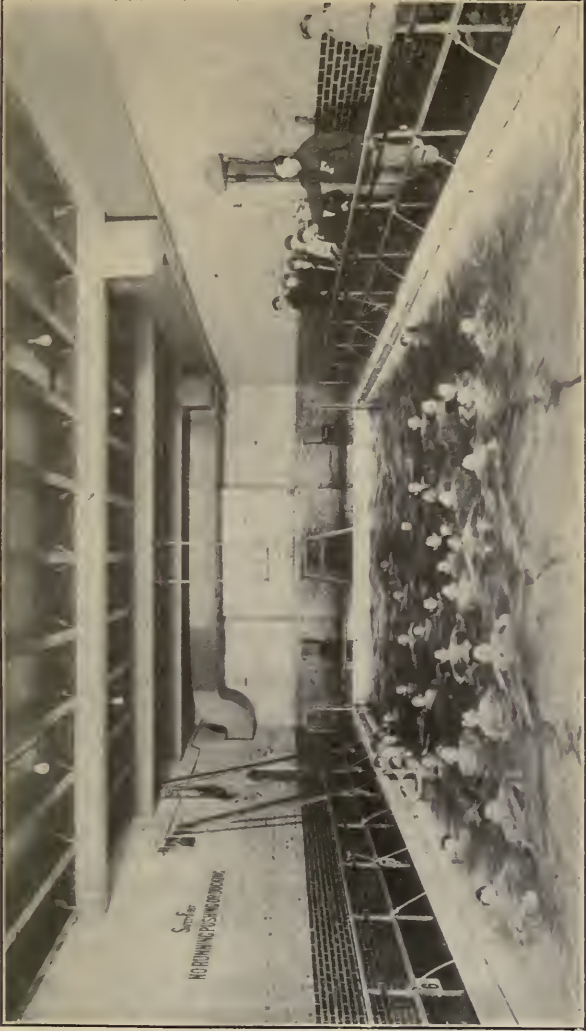
B
 Special facilities, taking care of 800 children in the morning hours and an equal number in the afternoon hours (1,600 in all daily)

					Auditorium
					Shops
					Laboratories
					Playground, gardens, gymnasium and library

have been replaced by special facilities of one kind or another. The so-called duplicate organization and the longer school day make it possible to give larger facilities to twice as many children as the classrooms alone would accommodate. The duplicate school, as developed at Gary, is not therefore a device to relieve congestion or to reduce expense, but the natural result of efforts to provide a richer school life for all children.

The enriched curriculum and the duplicate organization support each other. The social situation requires a scheme of education fairly adequate to the entire scope of the child's activities and possibilities; this cannot be achieved without a longer school day and a more varied school equipment. The duplicate school endeavors to give the longer day, the richer curriculum, and the more varied activities with the lowest possible investment in, and the most intensive use of, the school plant. The so-called duplicate school is thus a single school with two different types of facilities in more or less constant and simultaneous operation, morning and afternoon.

Such is the Gary plan in conception. What about the execution? Is it realized at Gary? Does it work? What is involved as respects space, investment, etc., when ordinary classrooms are replaced by shops, playgrounds, and laboratories? Can a given equipment in the way of auditorium, shops, etc., handle precisely the same number of children accommodated in the classrooms without doing violence to their educational needs on the one hand, and without waste through temporary disuse of the special facilities, on the other? To what extent has Gary modified or reorganized on modern lines the treatment of the common classroom subjects? How efficient is instruction in the usual academic studies as well as in the newer or so-called modern subjects and activities? Is the plan economical in the sense that equal educational advantages cannot be procured by



Swimming Pool—Froebel School

any other scheme except at greater cost? These and other questions as to the execution of the Gary plan are, as far as data were obtainable, discussed in the separate volumes making up the present survey.

The concrete questions above mentioned do not, however, exhaust the educational values of a given school situation. From every school system there come imponderable products, bad as well as good. Aside from all else, many observers of the Gary schools report one such imponderable in the form of a spiritual something which can hardly be included in a study of administration and eludes the testing of classroom work. These observers have no way of knowing whether Gary school costs are high or low; whether the pupils spell and add as well as children do elsewhere; but, however these things may be, they usually describe the pupils as characterized by self-possession, resourcefulness, and happiness to an unusual degree. While different schools and indeed different parts of the same school vary in this respect, the members of the survey staff agree that, on the whole, there is a basis of fact for these observations. Gary is thus something more than a school organization characterized by the two main features above discussed.

The reason is not far to seek. Innovation is stimulating, just as conformity is deadening. Experiment is in this sense a thing wholesome in itself. Of course it must be held to strict accountability for results; and this study is the work of persons who, convinced of the necessity of educational progress, are at the same time

solicitous that the outcome be carefully observed. The fact that customary school procedure does not rest upon a scientific basis, does not willingly submit itself to thorough scrutiny, is no reason for exempting educational innovations from strict accountability. The very reverse is indeed true; for otherwise innovation may imperil or sacrifice essential educational values, without actually knowing whether or not it has achieved definite values of its own. Faith in a new program does not absolve the reformer from a watchful and critical attitude toward results. Moreover, if the innovator formulates his purposes in definite terms and measures his results in the light of his professed aims, the conservative cannot permanently escape the same process. Gary, like all other educational experiments, must be held accountable in this fashion. Subject however to such accountability, the breaking of the conventional school framework, the introduction of new subject matter or equipment, even administrative reorganization, at Gary as elsewhere, tend to favor a fresher, more vigorous interest and spirit. Defects will in the following pages be pointed out in the Gary schools—defects of organization, of administration, of instruction. But there is for the reasons just suggested something in the Gary schools over and above the Gary plan. Problems abound, as in every living and developing situation. But the problems are the problems of life, and, as such, are in the long run perhaps more hopeful than the relatively smooth functioning of a stationary school system. Thus, not-

withstanding the defects and shortcomings which this study will candidly point out, the experiment at Gary rightly observed and interpreted is both interesting and stimulating.

PHYSICAL TRAINING AND PLAY

I. PLACE OF PHYSICAL TRAINING AND PLAY

A STRIKING feature of the Gary schools is the prominence given to physical education. The time assignment in the daily school program is unusual; most schools have both indoor and outdoor facilities, and special teachers are provided for all except the two smallest schools.¹

The emphasis is, however, not uniform throughout the system. There is the greatest difference from school to school, and even from class to class in the same school, with respect to the time allotment and particularly with respect to the physical training facilities provided. Yet, in the largest schools the first four grades have, as a rule, two hours of physical training and play daily, and all

¹The Gary school system consists of nine schools, as follows: Froebel, Emerson, Jefferson, Beveridge, Glen Park, 24th Avenue, Ambridge, Clarke, and West Gary schools. Of these Froebel and Emerson have large and admirable modern plants; Jefferson, a conventional plant, somewhat remodeled. The Beveridge school has a six room brick building, also an old two room frame structure, and five portables. Similarly at the Glen Park school, the plant consists of a main building—a six room brick structure—and three portables. The remaining schools, with the exception of Clarke, which is a two room rural school, are merely groups of portables, ranging from two to six. (For details, see Chapter III of the report on Organization and Administration.)

These schools vary in size from the West Gary school, with two teachers and 46 pupils, to the Froebel school, with 58 teachers and an enrollment of 2,087 children. The number of teachers, the enrollment, and the average daily attendance at each school for 1915-16 were as follows:

THE GARY PUBLIC SCHOOLS

other grades one hour, although it is not unusual for upper grade classes to have as much as two hours.

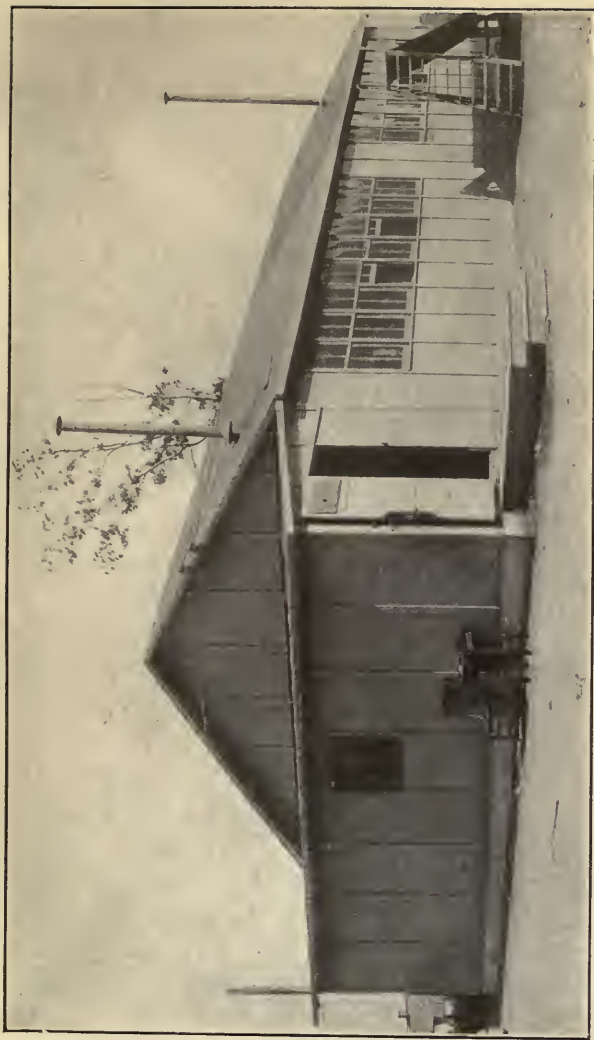
Take, for example, the spring schedule, 1915-1916, of class 8, 1A grade, Froebel school, which was as follows:

8:15- 9:15	Play
9:15-10:15	Auditorium
10:15-11:15	Handwork
11:15-12:15	Academic work
12:15- 1:15	Luncheon
1:15- 2:15	Play
2:15- 3:15	Nature study
3:15- 4:15	Academic work

This class, it will be noted, has two hours of physical training daily, 8:15 and 1:15, and has also an auditorium period, which, in the lower grades, is largely recreational.

As typical of the assignment in the upper grades, usually one hour daily, we offer the program of class 43, 7A grade:

SCHOOLS	NUMBER OF TEACHERS	TOTAL ENROLL- MENT 1915-16	AVERAGE DAILY ATTENDANCE
Froebel.....	58	2,087	1,503
Emerson.....	33	967	742
Jefferson.....	20	1,011	728
Beveridge.....	14	683	520
Glen Park.....	8	315	224
24th Avenue.....	7	347	254
Ambridge.....	3	146	92
Clarke.....	2	52	39
West Gary.....	2	46	30
Total.....	147	5,654	4,132



Gymnasium—Beveridge School. Two portables joined end on end

PLACE OF PHYSICAL TRAINING AND PLAY 5

8:15- 9:15	Shop work
9:15-10:15	Shop work
10:15-11:15	Auditorium
11:15-12:15	Luncheon
12:15- 1:15	Academic work
1:15- 2:15	Academic work
2:15- 3:15	Gymnasium
3:15- 4:15	Academic work

The actual time allotted in Emerson, Froebel, and Jefferson—the three largest schools—was, by grades, for the school year 1915-1916, as follows:

TABLE I
HOURS ALLOTTED TO PHYSICAL TRAINING AND PLAY
SCHOOL YEAR 1915-1916¹

GRADE	EMERSON	FROEBEL	JEFFERSON
1	400	416	400
2	400	400	400
3	377	400	400
4	266	325	400
5	200	320	400
6	200	250	400
7	200	200	400
8	200	200	400

¹The hours reported in this table are the average allotment for the several classes in the given grade, with the school year reckoned as 200 days.

A time allotment in any one school year of 400 hours to physical training and play in the lower grades and from 200 to 400 hours in the upper grades is altogether unusual. Such time emphasis gives physical training and play the first place in the school program, as can be seen when the different studies are ranked on the basis of the

total time of the elementary school allotted to each activity (Table II). For example, a child going through the Emerson, Froebel, or Jefferson schools has on the average 2,697 hours in physical training and play, as compared with 1,605 hours in drawing and shop, 1,600 in auditorium, or 1,323 in reading.

TABLE II

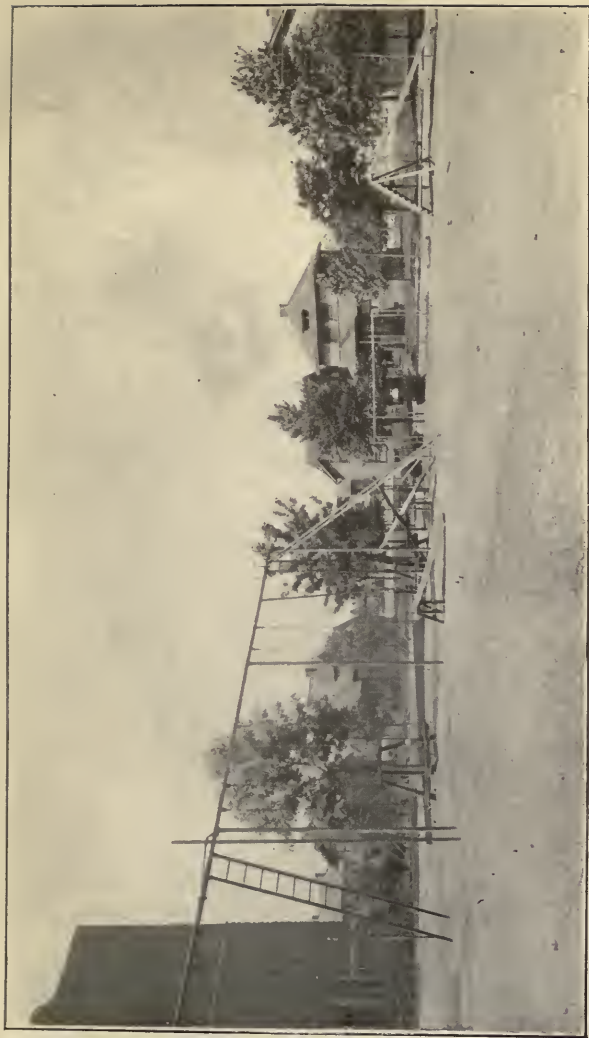
RANKING OF STUDIES AND ACTIVITIES ON BASIS OF TIME ALLOTMENT¹

RANK	AVERAGE TOTAL HOURS ALLOTTED	PER CENT. OF TOTAL ELEMEN- TARY SCHOOL TIME
1 Physical Training and Play ...	2,697	24
2 Drawing and Shop.....	1,605	14
3 Auditorium.....	1,600	14
4 Reading.....	1,323	12
5 Arithmetic.....	958	9
6 Language.....	798	7
7 Science.....	567	5
8 Spelling.....	496	4
9 History.....	339	3
10 Writing.....	329	3
11 Geography.....	238	2
12 Music.....	188	2
13 German.....	62	1

¹For details and method of computation, see *The Gary Public Schools: A General Account*.

This unusual emphasis also puts Gary in a class by herself. Of the total time of the elementary school, Gary gives 2,697 hours, or 24 per cent., to physical training and play, as compared with 927 hours, or 11 per cent., the average in fifty representative American cities.¹ However, the disparity between Gary and the fifty cities

¹See *The Gary Public Schools: A General Account*, Chap. V.



Boys' Playground—Emerson School

in question is not so great as it appears from the above figures. The allotment at Gary covers, on the one hand, activities ranging from the free play of the old time country school "recess" type to strictly instructional exercises. On the other hand, as pointed out elsewhere,¹ when pupils of the middle and upper grades are scheduled for physical training and play two periods daily they seldom report for more than one. Moreover, when pupils have religious instruction, library, music, drawing, or dancing outside the school, or help at home or in business, the time is almost always taken from the physical training allotment. Nevertheless, the Gary authorities have undoubtedly viewed in a large way the place of physical training in modern education, and are easily giving to it double the time allowed in the average city system.

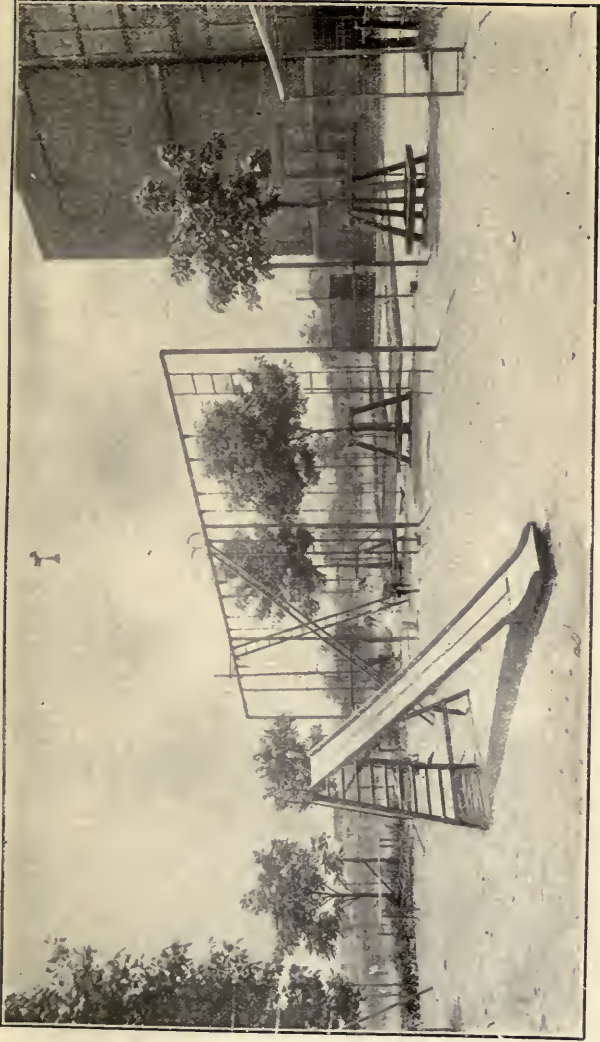
¹See The Gary Public Schools: A General Account, Chap. V.

II. FACILITIES

TO CARRY out this program two kinds of physical training and play facilities are provided, indoor and outdoor. The indoor provisions of the two modern buildings, Emerson and Froebel, are elaborate. Emerson has, for example, two gymnasiums, one for boys and one for girls, each containing 3,400 square feet of floor space. There are also separate lockers and dressing rooms, and shower baths, besides a splendid swimming pool, 47 by 27 feet, used on alternate days by boys and girls. Froebel is similarly equipped, except that it has two swimming pools.

The indoor facilities of the other schools are less satisfactory. The attic gymnasium of Jefferson is large, but poorly lighted and ventilated, and its use involves a considerable fire hazard. A lean-to extension 51 by 18 feet and an adjacent portable serve at Glen Park; portables are employed exclusively at Beveridge and Ambridge, and there is an old one room rural building at 24th Avenue.¹ West Gary and Clarke are without gymnasiums. Except in the case of Emerson and Froebel, the Gary school buildings are therefore not better equipped with indoor physical training and play facilities than are

¹This was classed in the note on page 3 as a portable.



Girls' Playground—Emerson School



most of the schools throughout the country, and not so well as are some.

Of the outside facilities those of the Emerson and Froebel schools are best. For example, at Emerson, directly to the rear of the school building, on either side, a space 66 by 44 feet supplies a handball court, sand box, and wading pool. North, across the drive and on the east, is the playground for girls and smaller children, the park, with its much-used tennis courts (two), and the "zoo," together occupying a space 218 by 176 feet. On the west, and also across the drive, lies the main playground, 336 by 120 feet, designed especially for boys. Finally, across the street to the east, is the athletic field, occupying an entire block, 607 by 286 feet. This field is now only partly developed, but when completed will contain a running track, a football field, a baseball field, and a coasting hill.

The West Gary school, consisting of two portables, represents the other extreme. All it has in this respect is an open, undeveloped lot. Nevertheless it is to be remarked that however small the school and humble the plant, there are some outside provisions for play and recreation.

The inside and outside facilities at each of the Gary schools are as follows:

TABLE III
PHYSICAL TRAINING AND PLAY PROVISIONS IN THE GARY SCHOOLS
EMERSON SCHOOL

	SQUARE FEET
Playground (includes park and "zoo").....	84,496
Athletic field ¹	173,602

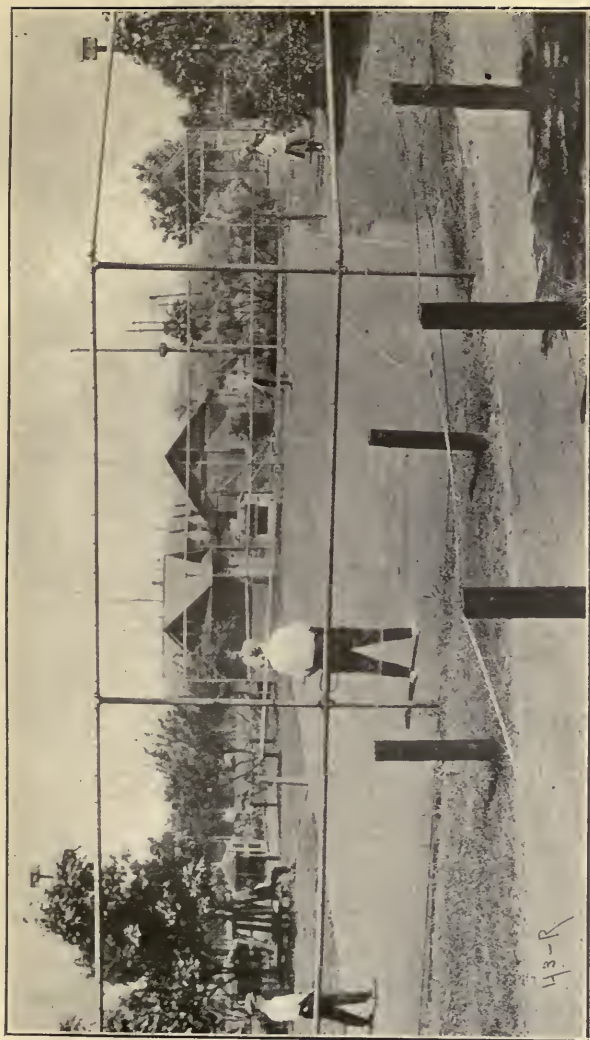
¹Owned by city, but operated by board of education.

THE GARY PUBLIC SCHOOLS

TABLE III—Continued

	SQUARE FEET
Boys' gymnasium.....	3,387
Girls' gymnasium.....	3,387
Swimming pool (Pool proper 702 square feet; used alternately by boys and girls).....	1,269
FROEBEL SCHOOL	
Playground.....	60,900
Athletic field ¹	159,850
Boys' gymnasium.....	3,978
Boys' swimming pool (Pool proper 1,260 square feet).....	2,320
Girls' gymnasium.....	3,978
Girls' swimming pool (Pool proper 1,260 square feet).....	2,320
JEFFERSON SCHOOL	
Playground.....	15,748
Athletic field.....	32,130
Gymnasium.....	8,253
GLEN PARK SCHOOL	
Playground.....	21,684
Gymnasium.....	1,567
BEVERIDGE SCHOOL	
Playground.....	13,000
Gymnasium.....	1,550
24TH AVENUE SCHOOL	
Playground.....	5,300
Gymnasium.....	600
AMBRIDGE SCHOOL	
Playground ²	14,000
Gymnasium.....	775
CLARKE SCHOOL	
Playground.....	10,742
WEST GARY SCHOOL	
Playground ²	25,200

¹ Owned by city, but operated by board of education.² Not owned by board of education.



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Tennis Court—Emerson School

The equipment of both gymnasium and grounds is as a rule generous. At the Froebel, Emerson, Jefferson, Beveridge, and Glen Park schools there is to be found almost every piece of apparatus that a physical training instructor or a playground teacher might desire. Even the very smallest schools have some equipment. For example, at West Gary, although there is no gymnasium and hence no gymnasium apparatus, the undeveloped playground is equipped with a merry-go-round, teeter board, and sliding board. Much of the apparatus was made in the school shops and installed, under the direction of the shop and physical training teachers, by the boys themselves.

The equipment of Froebel is typical of that of the best schools, varying with their size. Froebel, with a total enrollment for the school year 1915-1916 of 2,087, has the following apparatus:

BOYS' GYMNASIUM

- 120 Indian clubs
- 132 dumb-bells
- 6 basketballs
- 2 sets basketball goals
- 1 volley ball and net
- 3 footballs
- 5 indoor baseballs
- 1 indoor baseball bat
- 2 soccer balls
- 2 sets parallel bars

THE GARY PUBLIC SCHOOLS

- 1 set jumping standards
- 1 buck
- 1 take-off board
- 1 catcher's glove
- 1 catcher's mask
- gymnasium mats

GIRLS' GYMNASIUM

- 120 Indian clubs
- 132 dumb-bells
- 2 basketballs
- 2 sets basketball goals
- 2 balance beams
- 2 climbing ladders
- 2 climbing ropes
- 6 traveling rings
- 1 gymnasium buck
- 1 parallel bar
- 6 benches
- 1 set bean bags
- 300 wooden playground blocks
- 22 hockey clubs
- 8 gymnasium mats
- 1 piano
- 1 victrola

PLAYGROUND AND ATHLETIC FIELD

- 2 May poles
- 2 traveling ladders



Athletic Field—Froebel School

FACILITIES

13

- 3 sliding boards
- 7 teeter boards
- 12 swings
- 2 trapezes
- 2 sliding poles
- 2 sets quoits
- 1 climbing rope
- 2 football goals
- 2 soccer balls
- 1 baseball outfit
- 2 handball courts
- 1 volley ball court
- 2 tennis courts
- 2 wading pools
- 2 sand pits

III. TEACHING STAFF

FIFTEEN teachers conduct the physical training in the nine different schools. There are, besides, twenty "special," "substitute," and "pupil" teachers—mostly in Emerson and Froebel—who assist. Over all is a supervisor, who also has regular teaching duties. He defines aims, fixes general methods of procedure, and devotes some time to "teams" and interschool athletics.

The physical training teachers are, on the whole, well qualified. On the side of general training, of the fourteen reporting, nine are high school graduates, one has had part of a normal school course, one has completed a standard normal school, one has had some college work, two are college graduates. Only one is without special training. Of the others, nine have had two years, and four have had three years of special preparation.

The supervisor received a regular salary of \$1,100, but increased this to \$1,964 by working Saturdays, nights, Sundays, and during the summer. The salaries of the physical training teachers in the regular day schools range from \$600 to \$1,000. Three received \$600; two, \$750; one, \$800; one, \$850; four, \$900; one, \$950; and



Playground—Glen Park School

three, \$1,000. Without exception, they also render additional service for which they receive additional pay. Two worked Saturdays; one, nights; eight, Saturdays and nights; three, Saturdays, nights, and during the summer; and one, Saturdays, nights, Sundays, and during the summer. Their average wage was thus increased from \$859 to \$998. The twenty "special," "substitute," or "pupil" teachers received a nominal sum, amounting to \$385 for all.

The total spent for physical training and play teachers in the regular day school thus amounted in 1915-1916 to \$11,825.25, making the per pupil instruction cost, exclusive of supervision, supplies, and equipment, \$2.09 on total enrollment, or \$2.86 on average daily attendance.¹

¹The supervisor, as pointed out, also teaches. He is, however, not listed in the school program as a teacher and we do not know how much time he gives to it. Hence we have charged his entire day school salary against supervision.

IV. INSTRUCTION

THE physical training teachers of Gary are responsible for everything that pertains to physical education. Regular teachers are not required to give any attention whatever to the subject. There is no marching to and from classes, or "setting-up" or "breathing" exercises as a part of classroom work. However, the teachers in charge of the small schools on the outskirts of the city do attend to physical training. It is possible also that here and there a regular teacher in the larger schools, prompted by personal interest, gives some drill in proper walking, standing, and sitting, but no one is required to do so. The physical education of the children, therefore, centers almost exclusively in the gymnasium, swimming pool, and playground.

The schools are organized so that there are instruction groups for the gymnasiums and playgrounds six hours daily. These are also open to the children during the two luncheon periods and for an hour after school; that is, they are open from 8:15 A. M. to 5 o'clock. The working day of the physical training teachers is, however, only seven hours. The policy of the department is to do as much as possible out of doors, but in actual practice the gymnasiums are used more than the playgrounds.



Playground—24th Avenue School

The instruction groups are often large, at times much too large, making the daily program of the physical training teachers a heavy one. Occasionally groups of a single class of from 12 to 15 are found, but the larger groups are more frequent, at times numbering 150, composed of pupils from all grades from the first to the eighth. The schedules given in Table IV¹ illustrate the make-up and the size of the very large classes. However, excusing pupils for library, religious instruction, and home work, and particularly the optional attendance of pupils on one hour of physical training when assigned two hours daily, often reduce the actual class attendance considerably below the scheduled number.

Serious problems arise in attempting to handle such classes. Exercises and games suited to each of the different age and grade groups cannot be given. Consequently, "free play" predominates, dangerously near to the exclusion of everything else. This "free play" is of an aimless, running about, and "fooling" character that has little value except as a means of "letting off steam" and stimulating blood circulation—both of which are desirable, but may be secured incidentally in connection with a more constructive use of play time. However, this type of free play accords with the apparent policy of the system—that of giving children great freedom. Even in the brief periods of calisthenic exercises, it is not unusual to see several pupils standing idly in their places or taking the exercises listlessly and incorrectly. Snappy, vigorous work is not insisted upon. Hence, much

¹See pages 18 and 19.

TABLE IV
PUPILS IN TEACHER A'S CLASSES (BOYS) AND THEIR GRADES

8:15-9:15		9:15-10:15		10:15-11:15		1:15-2:15		2:15-3:15		3:15-4:15	
PERIODS											
NUMBER	GRADE	NUMBER	GRADE	NUMBER	GRADE	NUMBER	GRADE	NUMBER	GRADE	NUMBER	GRADE
33	1A	13	4B	19	1B	33	1A	18	3A	19	1B
16	2C	9	4A	22	2A	23	3B	17	4C	16	2C
23	3B	21	7C	18	3C	27	3A	21	5C	22	2A
7	5B	20	7A	27	3A	13	4B	16	5A	16	5A
14	5A	13	8A	17	4C	9	4A	20	6C	20	6C
21	7C			21	5C	7	5B	8	7C	8	7C
20	7A					14	5A	8	7A	8	7A
13	8A										
147		76		124		126		108		109	

Grand Total, 690—Average per Period, 115

TABLE IV—Continued
 PUPILS IN TEACHER B'S CLASSES (GIRLS) AND THEIR GRADES

PERIODS											
8:15-9:15		9:15-10:15		10:15-11:15		1:15-2:15		2:15-3:15		3:15-4:15	
NUMBER	GRADE	NUMBER	GRADE	NUMBER	GRADE	NUMBER	GRADE	NUMBER	GRADE	NUMBER	GRADE
36	1A	18	4B	12	1B	36	1A	20	3C	12	1B
20	2C	9	4A	24	2A	13	3B	18	4C	20	2C
13	3B	21	7C	20	3C	12	3A	23	5C	24	2A
2	5B	22	7A	12	3A	18	4B	23	5A	23	5A
20	5A	22	8A	18	4C	9	4A	16	6C	16	6C
21	7C			23	5C	2	5B	9	7C	9	7C
22	7A					20	5A	14	7A	14	7A
22	8A										
156		92		109		110		123		118	

Grand Total, 708—Average per Period, 118

of the physical value of the exercise is lost and the habit of doing work in a slipsho manner is a logical result.

For example, a class of boys in the Emerson school reports for gymnasium at 2:15 o'clock. They come down the hall 68 strong, ranging from the third to the tenth grade, and pour into the gymnasium. A few have stopped on the way at their lockers to get their gymnasium shoes and leave their coats, but most of them come without any change of clothing. The teacher tosses a basketball or two to them, and a merry scramble begins. Some "shoot baskets," others pass the ball, and others "rough-house" in the center of the floor. In a corner provided with mats informal wrestling bouts may be staged, a few may climb ladders or practise on the bars, and all the while boys, big and little, run from place to place, shout, trip, punch, and indulge in a general mix-up.

After a few minutes the instructor selects two team leaders, each choosing about twenty boys; these are lined up in two squads for a basketball relay contest. As soon as this is started a basketball game is gotten under way, and then a tug-of-war is set going. The wrestling is still in progress, and several informal boxing bouts are probably taking place here and there. Those not engaged in the activities mentioned are "rooting" for the various contestants or running about in impromptu tag games. Ten to fifteen minutes before the end of the period, the instructor blows his whistle for attention, assembles the group in class formation, and puts them



Playground—Reveridge School

through some formal exercises with more or less uniformity and individual participation. Sometimes the order is reversed, calisthenics coming first, games and free play following. When the weather is favorable the whole group is frequently taken to the playground; or, if there are two teachers, the class may be divided, one half going to the playground and the other remaining in the gymnasium.

Again, with such large classes little attention can be given to corrective exercises adapted to individual needs. Physical examinations are not systematically made, and no records of physical development are kept. The physician in charge of medical inspection has recently undertaken, with some volunteer assistance from local hospital nurses, to make such examinations and to keep records of the physical progress of the children. His chief tasks are, however, to guard against the spread of communicable diseases, examine for defects of eyes, ears, and throat, and to oversee in a general way heating, lighting, ventilation, and sanitation. Epidemics among Gary school children have been rare and limited in extent. This may be due to the prompt quarantine of initial cases, or to the strong resistive power of children who have a large amount of physical activity, or to both.

The most systematic instruction is in the swimming pools, particularly at the Froebel school. Pupils go to the pools in groups of about twenty five twice a week, after first passing through the shower baths. They are taught to swim and dive, and tests of skill and speed add

zest and interest. Life saving and first aid are also taught and well mastered by drill.

Some correlation is attempted between the activities of the play periods and the academic work. For instance, drill in numbers is secured by the use of games which require the players to keep their individual or team scores; points are added, penalties subtracted, totals divided to get averages, etc. The pupil who cannot do this is at such a disadvantage, it is claimed, that he feels the necessity of improving his number work.

This account of physical training instruction suggests public playgrounds, where children gather to amuse themselves out of school hours, rather than school work, where definite ends in the way of physical development are sought. In so far as children play freely on the playgrounds after school hours, the Gary arrangement is a wholesome one; but the same kind of freedom cannot be allowed children in their physical training work during school hours—although the longer school day includes part of the time children usually have for play—without losing much of the good which comes from systematic exercises under intelligent guidance.

The school playgrounds, with teachers in charge, are open, as suggested above, after school, and also on Saturdays. Except on special occasions, the attendance is light. For example, the playground attendance was taken on different Saturdays, the largest number ever counted at any one time being 46 children (Table V).

Three factors help to explain this light attendance:

TABLE V
SATURDAY PLAYGROUND ATTENDANCE¹

SCHOOL	DATE	TIME	NUMBER ON PLAYGROUNDS	AVERAGE DAILY SCHOOL ATTENDANCE
Emerson	April 25	9:00	0	742
Froebel	May 27	9:20	46	1,503
Jefferson	June 3	9:30	6	728
Beveridge	May 27	11:30	4	520
Glen Park	May 27	11:00	1	224
Ambridge	June 3	11:30	20	92
24th Avenue	May 27	10:30	15	254

¹The playgrounds at Clarke and West Gary schools are not open on Saturdays.

(1) the generous allotment of time to play in the regular day's program; (2) the large amount of open space available for play in most of the residential sections of Gary; and (3) the lack of organized activities on the playgrounds as an inducement to attend. An empty playground is a lonesome place, and children avoid it unless the crowd goes or the leader is there to start something.

At the Emerson, Froebel, and Jefferson schools, the playgrounds, being equipped with electric lights, are also open for evening use. Boys and young men at work during the day use them to some extent, but the gymnasiums and swimming pools are more popular. Swimming instructors invariably have evening classes of from fifteen to thirty, and in the boys' gymnasiums the instructors in wrestling have about the same number. In the girls' gymnasiums, dancing is the popular activity, with basketball a close competitor. Parties for both sexes are occasionally held in the gymnasiums, and mo-

tion pictures, amateur theatricals, and concerts are provided in the auditoriums. Yet special occasions, specially advertised, are the only evening features that attract considerable numbers to the school buildings.

The athletic activities center largely around basketball and baseball. Interschool games are frequent, and considerable energy is devoted to teams for intercity games. The Gary schools, however, err here just as most schools err. Attention is centered on the training of a few team players, to the practical exclusion of the rest of the student body. Track and field sports claim some consideration, but only a small percentage of the enrollment actually participate. A meet between the Emerson and Froebel schools held during the time of this study brought out only seventy eight competitors and but a few more spectators, although there was a full program of events arranged for both boys and girls. The situation would be greatly helped by a system of group athletics, whereby all the pupils of a class or a grade would compete with corresponding groups in other schools.

Where so much time is given to physical activities, one might expect physical training to be required in the high schools, but such is not the case. Indeed, instances were found of late comers who were to be graduated without having had any physical training whatever.

The teachers work independently, some doing their work well, others poorly. There is, therefore, the greatest need of supervision. The present supervisor besides



Playground—West Gary School

teaching has jurisdiction over athletics, demonstration, and the distribution of supplies, but his authority is not definite either in detail or extent. Consequently he is greatly handicapped in systematizing the work and in making it as effective as it might be even under the adverse conditions already pointed out.

V. TESTS AND RESULTS

FOR some years the athletic badge tests for elementary and secondary school boys have been used generally throughout the United States. They comprise a sixty yard dash, a standing broad jump, and a pull-up. Under the standards for these tests, normally developed boys from ten to thirteen years of age should run 60 yards in $8\frac{3}{4}$ seconds, do a standing broad jump of 5 feet 9 inches, and pull up four times. Boys thirteen years and older should do the run in 8 seconds, jump 6 feet, and pull up six times.¹

The emphasis on play in the Gary schools affords abundant opportunity to run and jump, and the bars, ladders, and rings in gymnasiums and on playgrounds provide the means for developing the arm, shoulder, back, and chest muscles that function in the pull-up. These badge tests were therefore chosen to measure the products of the physical training at Gary. They are not a complete measure of physical efficiency, but they serve as a fair index of heart, lung, and general muscular development.

¹For conditions controlling the giving of these tests, see Athletic Badge Tests for Boys, issued by The Playground and Recreation Association of America.

Approximately all boys ten years of age and over were tested. The results, when expressed in terms of the averages for the different age groups, are given in Table VI.

TABLE VI
RESULTS OF BADGE TESTS FOR BOYS

THE 60 YARDS DASH

(Standard: 8.60 seconds for lower groups, and 8 seconds for upper groups)

AGE	NUMBER TESTED	AVERAGE TIME GARY	AVERAGE TIME OTHER CITIES ¹
LOWER AGE GROUPS		(sec.)	(sec.)
Under 10 years	31	11.00	10.00
10-11 "	43	9.67	9.21
11-12 "	74	9.64	8.94
12-13 "	100	9.32	9.10
UPPER AGE GROUPS			
13-14 years	86	9.38	8.96
14-15 "	41	9.27	8.65
15 and over	31	8.49	8.40

THE STANDING BROAD JUMP

(Standard: 5 feet 9 inches for lower groups, and 6 feet for upper groups)

AGE	NUMBER TESTED	AVERAGE DISTANCE, GARY		AVERAGE DISTANCE, OTHER CITIES ¹	
		(ft.)	(in.)	(ft.)	(in.)
LOWER AGE GROUPS					
Under 10 years	30	4	6.50	5	6.90
10-11 "	43	5	3.47	5	9.30
11-12 "	74	5	8.28	5	10.35
12-13 "	100	5	10.64	5	11.10
UPPER AGE GROUPS					
13-14 years	86	6	1.50	5	11.70
14-15 "	41	6	1.80	6	3.70
15 and over	31	7	0.31	6	8.50

¹The comparative data for the 1,100 boys are for the same tests, given under similar conditions in New Orleans, Seattle, Buffalo, and New York.

TABLE VI—*Continued*

THE PULL-UP

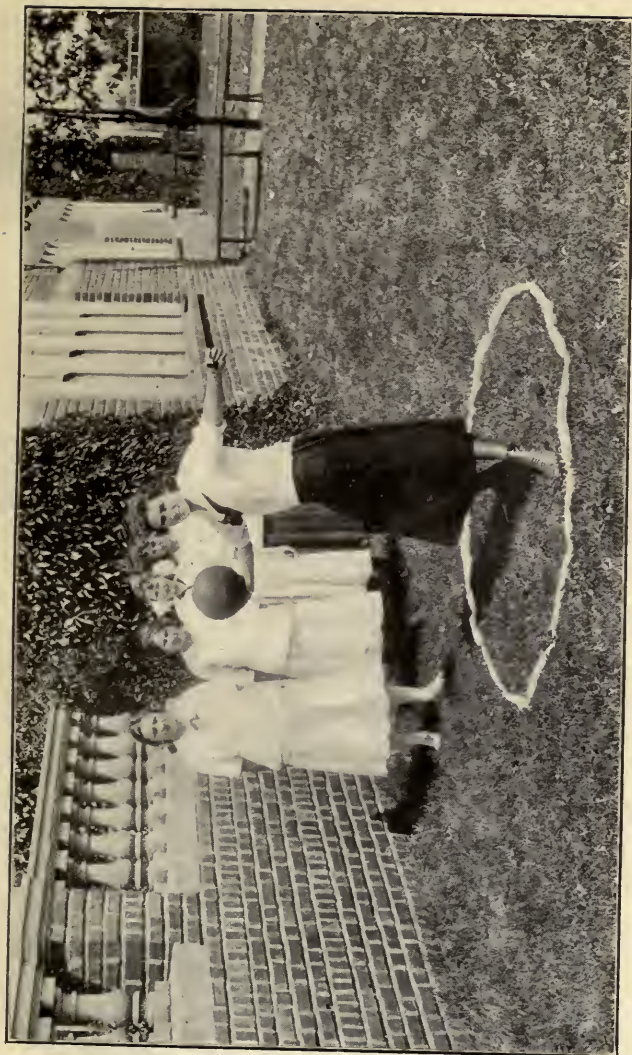
(Standard: 4 times for lower groups, and 6-times for upper groups)

AGE	NUMBER TESTED	AVERAGE TIME GARY	AVERAGE TIME OTHER CITIES*
LOWER AGE GROUPS			
Under 10 years	26	3.00	5.63
10-11 "	38	4.32	5.86
11-12 "	67	5.23	6.25
12-13 "	92	4.84	6.03
UPPER AGE GROUPS			
13-14 years	81	4.83	6.14
14-15 "	39	5.24	7.30
15 and over	31	7.03	8.64

*The comparative data for the 1,100 boys are for the same tests, given under similar conditions in New Orleans, Seattle, Buffalo, and New York.

The achievements of the Gary schools as thus measured are low. Not a single one of the seven different age groups reached the standard for the sixty yard dash. In the standing broad jump and the pull-up about half of the age groups fell below and about half exceeded the standards for these tests. The Gary achievements are also low in comparison with other cities. In the three tests, when the children are divided in each instance into seven different age groups, there are twenty one possible comparisons. In only two comparisons do the Gary boys equal or surpass the records of the boys from other cities.¹ These excel in the standing broad jump. That Gary children should do com-

¹The comparative results are practically the same when the boys are grouped by height and by weight.



Basketball throwing for distance

paratively better in this test than in the others is not surprising, as running and jumping are among the most common playground activities. The Gary results are also strikingly uneven. They differ from school to school and from individual to individual. For example, the individual records in the pull-up test range from zero, one, two, three times on up to twelve, thirteen, and even seventeen times. To what extent these low and uneven results may be due to children who have only been in the Gary school a short time, we do not know.

Other ways of reaching conclusions on the Gary physical training products were sought. The children were observed at play and in athletics. It is plainly evident that they are not easily fatigued. Both boys and girls are able to compete in such vigorous and lengthy events as potato races, obstacle races, sack races, basketball and volley ball, without undue exhaustion and with well sustained vigor. This conclusion is likewise borne out by the scores in basketball games with teams from other cities. Practically without exception, the scores for Gary mount up rapidly in the last half of the contest.

Low records in the tests and evidence of a high degree of bodily vigor are not ordinarily found together. Possibly the freedom allowed the children and the absence of exactness and finish in their work, coupled with the generous amount of time allotted to play and other forms of physical activity, account for these apparently conflicting results. However, under a proper régime, it

should be possible to secure good records and bodily vigor at one and the same time.

Although the athletic badge tests for girls are relatively new and there are no comparative records, it seemed desirable to give them at Gary. The tests employed were basketball or volley ball throwing, potato race, and running and catching. The respective standards for normally developed girls of different ages are given in Table VII.

TABLE VII
STANDARDS IN ATHLETIC BADGE TESTS FOR GIRLS

TEST EVENTS	STANDARDS FOR DIFFERENT AGE GROUPS		
	10 TO 13 YEARS	13 TO 15 YEARS	15 YEARS AND OVER
Basketball Throwing	34 feet	38 feet	42 feet
Volley Ball Throwing	36 feet	40 feet	44 feet
Potato Race (170 yards, 3 potatoes placed out and picked up)	42 seconds	39 seconds	38 seconds
Running and Catching (60 yards, with 3 catches and 5 turns)	25 seconds	22 seconds	20 seconds

One hundred twenty four girls competed in basketball throwing; 159, in volley ball throwing; 280, in the potato race; and 274, in running and catching.¹ Not one of the six age groups reached the standard in basketball throwing or in the potato race; only three groups equaled

¹ See Table VIII.

TESTS AND RESULTS

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TABLE VIII
RESULTS OF BADGE TESTS FOR GIRLS

BASKETBALL THROWING			
AGE GROUPS	NUMBER TESTED	AVERAGE DISTANCE	
		(feet)	(in.)
10-11 years	1	27	0.0
11-12 "	7	24	9.3
12-13 "	16	27	5.8
13-14 "	28	31	8.3
14-15 "	35	35	8.8
15 and over	37	36	6.0

VOLLEY BALL THROWING			
AGE GROUPS	NUMBER TESTED	AVERAGE DISTANCE	
		(feet)	(in.)
10-11 years	22	30	6.8
11-12 "	33	32	6.6
12-13 "	50	35	2.3
13-14 "	35	42	6.4
14-15 "	15	46	3.6
15 and over	4	52	7.7

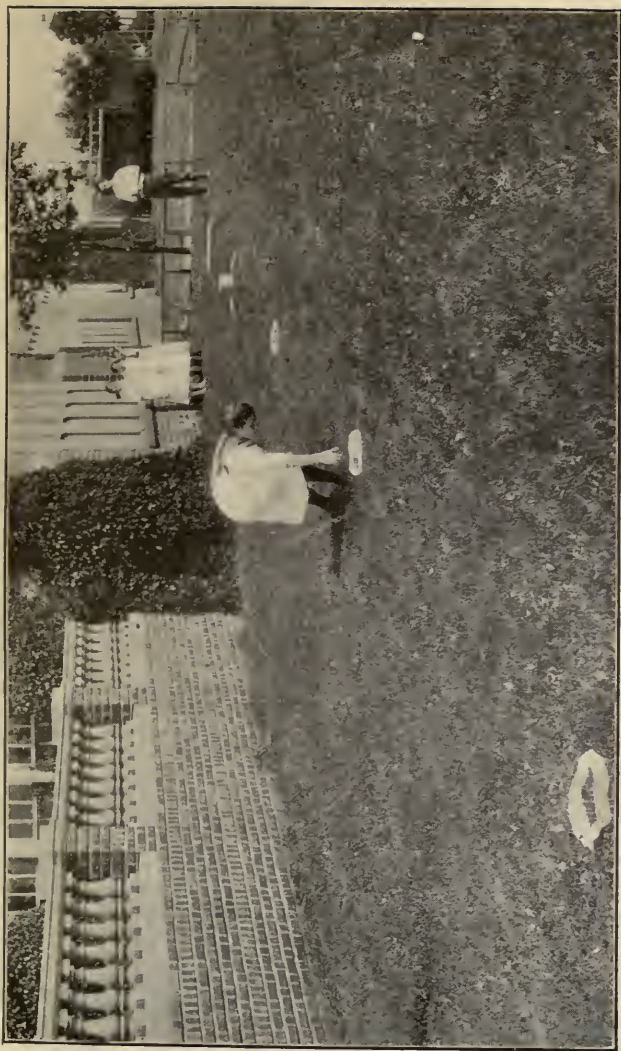
POTATO RACE		
AGE GROUPS	NUMBER TESTED	AVERAGE TIME
		(seconds)
10-11 years	23	45.54
11-12 "	41	45.42
12-13 "	66	44.53
13-14 "	62	44.73
14-15 "	47	44.19
15 and over	41	44.56

THE GARY PUBLIC SCHOOLS

TABLE VIII—*Continued*

RUNNING AND CATCHING		
AGE GROUPS	NUMBER TESTED	AVERAGE TIME
		(seconds)
10-11 years	22	27.90
11-12 "	37	27.56
12-13 "	65	24.20
13-14 "	62	23.35
14-15 "	47	23.64
15 and over	41	22.56

or exceeded the standard in volley ball, and one in running and catching. The results are therefore no more satisfactory than the results of the boys' tests. There is also the same unevenness and irregularity in development. Two hundred fifty two girls, for example, reached the standard in at least one test, but only 21 passed all three. And yet, like the boys, the girls evidenced unusual powers of endurance, particularly in running and catching, which require sustained effort.



Potato Race

VI. MERITS AND DEFECTS

To conclude: The time allotted at Gary to physical training and play is generous, to say the least. It affords ample opportunity for orderly exercises of a corrective, body-building character, as well as recreative games and free play. The two largest schools are elaborately equipped, and all schools are so organized as to keep physical training facilities in use throughout the school day.

The numbers to be managed at any one period are, however, too large, and the ages of the pupils in the same instruction group too varied. As a result, physical training teachers are confronted with an impossible task. They cannot give to individuals the needed attention or use exercises suitable to such widely varying stages of physical development. The situation is further complicated by excessive emphasis on free play. Undoubtedly free play is thus prominent owing to a reaction against dull formal exercise. As a matter of fact, however, it is not necessary to use uninteresting and formal exercises in order to get satisfactory results in physical training. The ends sought can be best secured from carefully selected games suited to the different age and sex groups, as these provide, in addition to the

interest and desirable fun elements, the exercises necessary for proper physical development.

A further point to be observed in physical training and play is excellence in achievement. There is a moral as well as a physical value in doing things well. Gary pupils have little idea of what supreme effort to do one's best really means. Their exercises as a rule lack snap, vigor, and finish. The schools have gone to the extreme in letting children do what they choose to do and do it in their own way.

Some good athletic teams are developed, but sufficient attention is not given to the athletic training of all children. A more general interest in athletics would not only react on the regular day schools, but would also promote a larger after school, Saturday, and evening use of gymnasiums and athletic fields.

There is evident need in this department of more teachers and of more supervisory control. Physical examinations should be systematically made, special corrective exercises prescribed for those with physical defects, and a careful record kept of each pupil's progress. To carry these recommendations into effect would of course add to the expense of the department, but the added expense would certainly be justified in view of the ends to be achieved.

While, therefore, the Gary schools offer splendid opportunities in physical training and play, it is only fair to state that these possibilities are not fully realized. Nevertheless, to those interested in the physical welfare

of boys and girls, the Gary schools offer encouragement. They have performed a distinct service in emphasizing the education of the whole child—physical as well as mental. In theory, they have come near doing justice to physical education; their practice is also in some respects commendable, but, in general, the execution of the plan falls too far behind the conception and intention.

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